

Post-Panafrican Structural Inheritance: An Hemi-Graben Geometry of the North-Western Border of West-African Craton (South-Western Anti-Atlas, Morocco)

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The Palaeozoic history of the NW edge of Gondwana is attributed to post-Pan African inherited structures. Its history reveals a polycyclic and very heterogeneous evolution.

This study was devoted to the field characterisation and linkage of events in the South-western Anti-Atlas and its southernmost cartographic extension between Zemmour and Ouled Dhlhim. The principal aim was to assess whether this cartographic linkage represents an actual geodynamic affinity. To achieve this, the study focussed upon aspects of the tectono-sedimentary evolution of the period prior to Hercynian compression.

Furthermore, this study provided insights into the creation of Palaeozoic sedimentary basins in the area. NNE-SSW orientated half grabens opened towards the west by jerked extensional listric faulting, controlled by post-Pan African wrench tectonics, which in turn reflects a regional geodynamic characteristic observed throughout the SW Anti-Atlas, in the linkage area of Zemmour-Ouled Dhlhim and further south in the northern part of Mauritanides. This faulting corresponds to a continuum of crustal extension originating with eocambrian rifting. In the western Anti-Atlas these rift dynamics correspond to simple extension, contrasting with the Mauritanides and the rest of the Anti-Atlas where transtension dominates.

This mode of structural configuration implies movement of the West African craton which seems to have withdrawn towards the SE during Palaeozoic basin formation.

Key words: Gondwana, half grabens, post-Pan African structures, south-western Anti-Atlas, Zemmour-Ouled Dhlhim, Morocco.